

## METHOD AND STRUCTURE FOR A COMPOSITE TRENCH FILL

### ABSTRACT OF THE DISCLOSURE

5           A method and structure for a composite trench fill for  
silicon electronic devices. On a planar silicon substrate  
having a first deposited layer of oxide and a second  
deposited layer of polysilicon, a trench is etched.  
Deposition and etch processes using a combination of oxide  
10 and polysilicon are used to fabricate a composite trench  
fill. The trench bottom and a lower portion of the walls are  
covered with oxide. The remaining portion of the trench  
volume is filled with polysilicon. The method may be used for  
junction field effect transistors (JFETs) and metal oxide  
15 semiconductor field effect transistors (MOSFETs).